

A fine-tuning assembly for an optical grating in an optical fiber is provided. The fiber is mounted under tension in a hollow structure which has a sliding member longitudinally slideable therein. The fiber is attached to both the sliding member and hollow structure. A slanted passage is provided in the sliding member, forming a small angle with the transversal, and a wedge member is slideably inserted in this passage. To fine-tune the spectral response of the grating, the wedge member is transversally displaced without any longitudinal displacement, preferably by the action of screws, thereby pushing on its walls to longitudinally slide the sliding member and adjust the tension in the fiber.